

LISTING OF CLAIMS

1. (Cancelled)
2. (Currently Amended) A recombinant vector comprising said isolated nucleic acid molecule of claim 17.
3. (Currently Amended) An isolated recombinant host cell comprising said recombinant vector of claim 2.
4. (Withdrawn) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - (a) a polypeptide fragment of SEQ ID NO:2 or the encoded sequence included in at least one of ATCC Deposit No: PTA-4454 or PTA-4803;
 - (b) a polypeptide fragment of SEQ ID NO:2 or the encoded sequence included in at least one of ATCC Deposit No: PTA-4454 or PTA-4803, having MGAT activity;
 - (c) a polypeptide domain of SEQ ID NO:2 or the encoded sequence included in at least one of ATCC Deposit No: PTA-4454 or PTA-4803;
 - (d) a polypeptide epitope of SEQ ID NO:2 or the encoded sequence included in at least one of ATCC Deposit No: PTA-4454 or PTA-4803;
 - (e) a full length protein of SEQ ID NO:2 or the encoded sequence included in at least one of ATCC Deposit No: PTA-4454 or PTA-4803;
 - (f) a polypeptide comprising amino acids 2 to 341 of SEQ ID NO:2, wherein said amino acids 2 to 341 comprising a polypeptide of SEQ ID NO:2 minus the start methionine; and
 - (g) a polypeptide comprising amino acids 1 to 341 of SEQ ID NO:2.
5. (Withdrawn) The isolated polypeptide of claim 4, wherein the full length protein comprises sequential amino acid deletions from either the C-terminus or the N-terminus.

6. (Withdrawn) An isolated antibody that binds specifically to said isolated polypeptide of claim 4.

7. (Currently Amended) An isolated recombinant host cell comprising a polypeptide encoded by the isolated nucleic acid of claim 17.

8. (Original) A method of making an isolated polypeptide comprising:

(a) culturing said recombinant host cell of claim 7 under conditions such that said polypeptide is expressed; and

(b) recovering said polypeptide.

9. (Withdrawn) The polypeptide produced by claim 8.

10. (Withdrawn) A method for preventing, treating, or ameliorating a medical condition, comprising the step of administering to a mammalian subject a therapeutically effective amount of said polypeptide of claim 4, or a modulator thereof.

11. (Withdrawn) A method of Claim 10, wherein said medical condition is related to aberrant MGAT3 activity.

12. (Withdrawn) A method of Claim 10, wherein said medical condition is selected from the group consisting of obesity and a gastrointestinal disorder.

13. (Withdrawn) A method of Claim 12, wherein said gastrointestinal disorder is Crohn's disease.

14. (Withdrawn) A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or absence of a mutation in said polynucleotide of claim 1; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.

15. (Withdrawn) A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or amount of expression of said polypeptide of claim 4 in a gastrointestinal tissue sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of said polypeptide.

16. (Withdrawn) A method of treating Crohn's disease comprising administering to a patient in need thereof an MGAT3 polypeptide or a modulator thereof.

17. (New) An isolated nucleic acid molecule comprising the polynucleotide of SEQ ID NO:1.

18. (New) The nucleic acid molecule of claim 17 wherein the nucleic acid is included in at least one of ATCC Deposit numbers PTA-4454 or PTA-4803.

19. (New) A polynucleotide encoding a polypeptide of SEQ ID NO:2.

20. (New) The polynucleotide of claim 19 wherein said polypeptide has monoacylglycerol acyltransferase 3 (MGAT3) activity.

21. (New) The polynucleotide of claim 19 wherein the polynucleotide is included in at least one of ATCC Deposit numbers PTA-4454 or PTA-4803.

22. (New) The polynucleotide of claim 19 further comprising a nucleic acid encoding an epitope tag.

23. (New) An isolated nucleic acid fragment that hybridizes to SEQ ID NO: 1 under stringent hybridization conditions, said conditions comprising an incubation period, at about 37 °C, in a hybridization solution comprising between 30% and 50% formamide.

24. (New) The isolated nucleic acid of claim 17 further comprising nucleotides 171 to 1190 of SEQ ID NO:1, wherein said nucleotides encode a polypeptide corresponding to amino acids 2 to 341 of SEQ ID NO:2 minus the start methionine.

25. (New) The isolated nucleic acid of claim 17 further comprising nucleotides 168 to 1190 of SEQ ID NO:1, wherein said nucleotides encode a polypeptide corresponding to amino acids 1 to 341 of SEQ ID NO:2 including the start codon.

26. (New) An isolated nucleic acid fragment that hybridizes to nucleotides of SEQ ID NO: 1; said nucleotides selected from the group consisting of nucleotides 168 to 1190 and 171 to 1190, wherein said isolated nucleic acid hybridizes under stringent hybridization conditions, said conditions comprising an incubation period, at about 37 °C, in a hybridization solution comprising between 30% and 50% formamide.